

Remarks

The Office Action date January 3, 2008, has been received and carefully reviewed. The following remarks form a full and complete response thereto. Claims 1-13 and 20-21 are withdrawn. Claims 1-21 are pending in the application and submitted for reconsideration.

Claim 19 was found to contain allowable subject matter.

Claims 14-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable by reason of obviousness over EP 0721176A2 (EP '176) in view of U.S. Patent No. 4,143,103 issued to Sheridan (Sheridon). The Applicant respectfully traverses the rejection and submits that claims 14-18 recite subject matter that is neither disclosed nor suggested by the combination of cited prior art.

Claim 14, upon which claims 15-18 depend, recites a method for producing a security document with a security element. The security element is produced using a material that is optically changeable by an electric or magnetic field. The optically changeable material includes a plurality of particles that are changeable in at least one of (1) their position or (2) alignment, by means of an electric or magnetic field. The optically changeable material is produced by enclosing the particles in microcapsules and incorporating them in a binder. For activating the optically changeable material, the microcapsules are brought by a swelling agent into a swollen state in which the particles are supported movably in the microcapsules. The optically changeable material is applied to the security document in its non-activated state.

According to the claimed method, a security element is first produced on the security document by a non-activated optically changeable material, and then the security document is then treated with a swelling agent to activate the optically changeable material. First, only a printing ink containing the particles in their microcapsules in non-activated form is used. See, e.g., page 6, 3rd paragraph of the English translation of the present application. After applying the swelling agent to the security document, the swelling agent penetrates into the ink and makes the microcapsules swell, which allows the contained particles to move freely. See, e.g., page 4, lines 10 to 1; page 6, lines 5 to 8 of the 3rd paragraph of the present application. EP '176 fails to disclose or suggest such features or steps.

Generally, EP'176 discloses to bring microcapsules in a swollen condition by means of a swelling agent. The method described in EP '176, however, suggests to apply this step before the layer containing the microcapsules is applied to a surface. See EP '176 at Abstract, column 3, lines 35 to column 4, line 43; see, especially, column 4, lines 31 to 34, column 4, lines 49 to 52 of EP '176. As already stated in the International Search Report for the base PCT application, the method according to the claim 14 is, compared to that of EP '176, more elaborate and more complex. It is, for example, more difficult to bring the swelling agent in contact with the microcapsules if the microcapsules are already embedded in the binding agent. Further, EP '176 discloses a method for camouflage in connection with structural members and fabrics,

especially articles of clothing, only, and does not disclose or suggest a method for manufacturing a security document. See, EP '176 at col. 4, lines 47 to 49.

Sheridon fails to cure the above-described deficiencies of EP '176. Sheridan discloses optically anisotropic particles, not particles being encapsulated in microcapsules. The anisotropic particles are mixed with a transparent material, preferably an elastomer. This elastomer-particle-mixture is cured and subsequently placed in a dielectric plasticizer in order to swell the elastomer material and to create a spherical void or cavity around each of the optically anisotropic particles. See, Sheridan at col. 2, lines 48 to 59. In this context, EP '176 explicitly refers to Sheridan and explains that the selection of the binding agents that may be used in such a method is limited. Most commonly gels are used, which are soft and instable after swelling and have to be bonded between glass or plastic sheets for protection. This process has the drawback that a large number of steps is required, the costs are high and the optical and tactile properties of such (electronic) paper are weak. See, EP '176 at col. 1, lines 20 to 36.

Thus, EP '176 actually teaches away from the combination proposed by the Office Action and the skilled person would not have obtained any hint or suggestion from EP '176 to change the method disclosed therein. The skilled person in the art would not have been motivated to give up the advantages of the method of EP '176 and instead, utilize the older method, more costly, more complex method described in Sheridan. The Applicant submits that the combination suggested by the Office Action

would, instead, have appeared to be a step backwards to skilled person and thus, the combination is improper.

Moreover, Applicant notes that the particles of Sheridan are embedded into the elastomer directly, i.e., are not present within microcapsules. Thus, the combination of EP '176 and Sheridan fails to disclose or suggest to activate particles enclosed in microcapsules after application to a security document and to apply them to a security document in a non-activated condition, as defined by claim 14. Moreover, EP '176 discloses its application is for camouflage in connection with structural members and fabrics, especially articles of clothing, only. See, EP '176 at col, 4, lines 47 to 49. EP '176 fails to disclose or suggest the application of its method to a security element in a security document.

Thus, for the several foregoing reasons, the combination of cited prior art fails to disclose or suggest each and every element of claim 14, upon which claims 15-18 depend, and instead, lacks disclosure of several elements of the claims and teaches away from such a combination. Accordingly, Applicant requests that the rejection to claims 14-18 be withdrawn and that claims 14-19 be allowed.

In view of the above, all objections and rejections have been sufficiently addressed. The Applicants submit that the application is now in condition for allowance and request that claims 14-19 be allowed and this application passed to issue.

In the event that this paper is not timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account No. 02-2135.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

Respectfully submitted,

May 5, 2008
Date

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